



Documentation Resources on the ESIP Wiki

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Terminology

Concept : General term for describing a documentation entity.

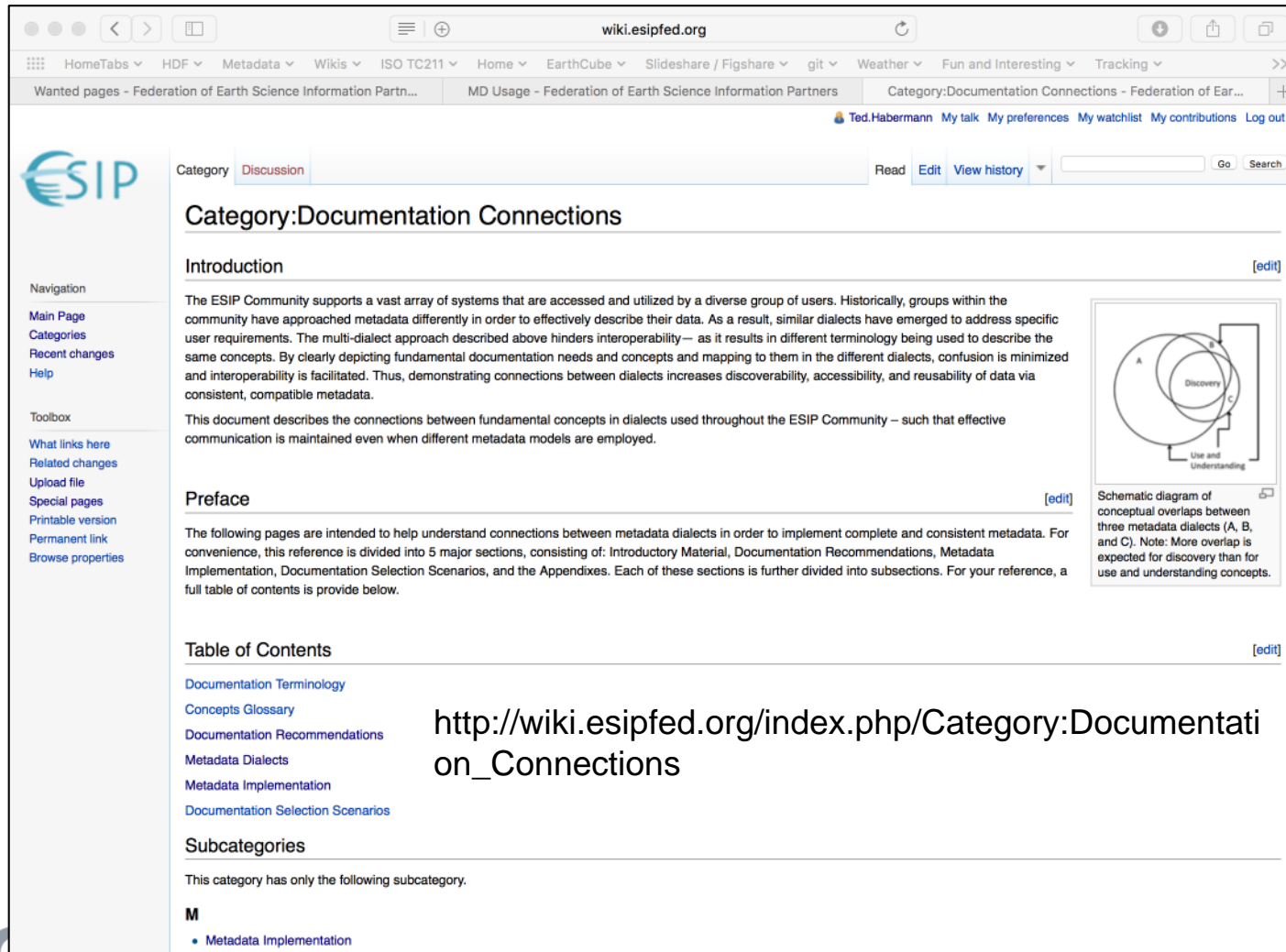
Dialect : A particular form of the documentation language that is specific to a community.

Recommendation: A set of concepts that a group believes is required for achieving a documentation goal.

Spiral: A set of concepts required to support a particular documentation need or use case.

Collection: A group of metadata records, commonly organized by data center, organization or project and often stored in a database or web accessible folder.

Documentation Connections



The screenshot shows a web browser window displaying the 'Category:Documentation Connections' page on the wiki.esipfed.org website. The browser's address bar shows 'wiki.esipfed.org'. The page has a navigation bar at the top with various tabs like 'HomeTabs', 'HDF', 'Metadata', 'Wikis', 'ISO TC211', 'Home', 'EarthCube', 'Slideshare / Figshare', 'git', 'Weather', 'Fun and Interesting', and 'Tracking'. Below the navigation bar, there's a user profile for 'Ted.Habermann' with links to 'My talk', 'My preferences', 'My watchlist', 'My contributions', and 'Log out'. The main content area is titled 'Category:Documentation Connections' and includes a 'Discussion' tab. The 'Introduction' section explains that the ESIP Community supports a vast array of systems and that the multi-dialect approach aims to minimize confusion by clearly depicting fundamental documentation needs and concepts. It also mentions that demonstrating connections between dialects increases discoverability, accessibility, and reusability of data. The 'Preface' section states that the following pages are intended to help understand connections between metadata dialects and that the reference is divided into 5 major sections: Introductory Material, Documentation Recommendations, Metadata Implementation, Documentation Selection Scenarios, and the Appendixes. A schematic diagram on the right shows three overlapping circles labeled A, B, and C, with 'Discovery' in the center and 'Use and Understanding' at the bottom. The 'Table of Contents' section lists various topics like 'Documentation Terminology', 'Concepts Glossary', 'Documentation Recommendations', 'Metadata Dialects', 'Metadata Implementation', and 'Documentation Selection Scenarios'. The 'Subcategories' section indicates that the category has only one subcategory, 'Metadata Implementation'.

Category:Documentation Connections

Introduction

The ESIP Community supports a vast array of systems that are accessed and utilized by a diverse group of users. Historically, groups within the community have approached metadata differently in order to effectively describe their data. As a result, similar dialects have emerged to address specific user requirements. The multi-dialect approach described above hinders interoperability – as it results in different terminology being used to describe the same concepts. By clearly depicting fundamental documentation needs and concepts and mapping to them in the different dialects, confusion is minimized and interoperability is facilitated. Thus, demonstrating connections between dialects increases discoverability, accessibility, and reusability of data via consistent, compatible metadata.

This document describes the connections between fundamental concepts in dialects used throughout the ESIP Community – such that effective communication is maintained even when different metadata models are employed.

Preface

The following pages are intended to help understand connections between metadata dialects in order to implement complete and consistent metadata. For convenience, this reference is divided into 5 major sections, consisting of: Introductory Material, Documentation Recommendations, Metadata Implementation, Documentation Selection Scenarios, and the Appendixes. Each of these sections is further divided into subsections. For your reference, a full table of contents is provide below.

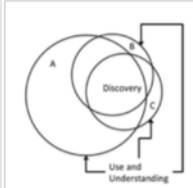
Table of Contents

- [Documentation Terminology](#)
- [Concepts Glossary](#)
- [Documentation Recommendations](#)
- [Metadata Dialects](#)
- [Metadata Implementation](#)
- [Documentation Selection Scenarios](#)

Subcategories

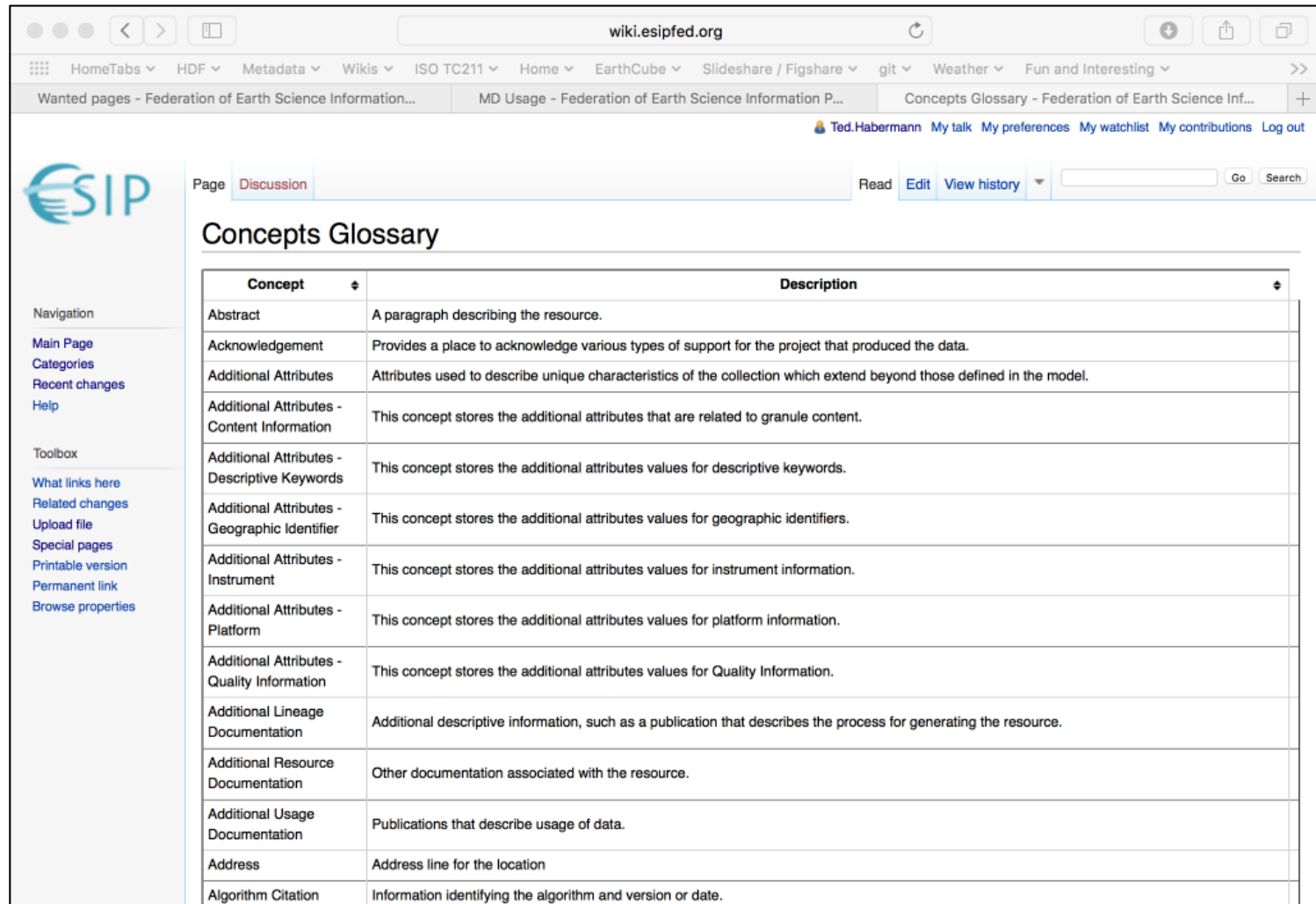
This category has only the following subcategory.

- [Metadata Implementation](#)



Schematic diagram of conceptual overlaps between three metadata dialects (A, B, and C). Note: More overlap is expected for discovery than for use and understanding concepts.

Concept Glossary

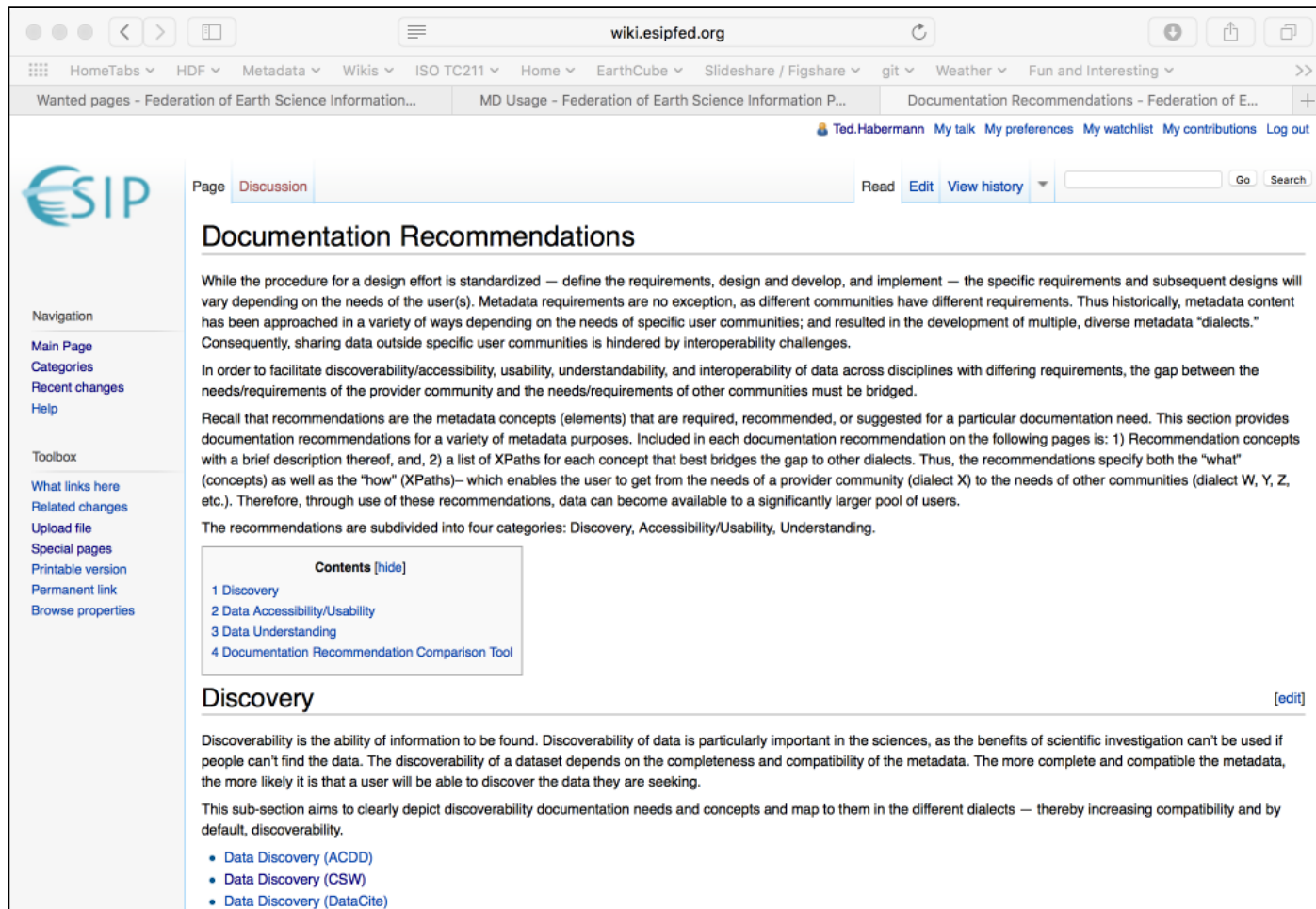


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Concepts Glossary

Concept	Description
Abstract	A paragraph describing the resource.
Acknowledgement	Provides a place to acknowledge various types of support for the project that produced the data.
Additional Attributes	Attributes used to describe unique characteristics of the collection which extend beyond those defined in the model.
Additional Attributes - Content Information	This concept stores the additional attributes that are related to granule content.
Additional Attributes - Descriptive Keywords	This concept stores the additional attributes values for descriptive keywords.
Additional Attributes - Geographic Identifier	This concept stores the additional attributes values for geographic identifiers.
Additional Attributes - Instrument	This concept stores the additional attributes values for instrument information.
Additional Attributes - Platform	This concept stores the additional attributes values for platform information.
Additional Attributes - Quality Information	This concept stores the additional attributes values for Quality Information.
Additional Lineage Documentation	Additional descriptive information, such as a publication that describes the process for generating the resource.
Additional Resource Documentation	Other documentation associated with the resource.
Additional Usage Documentation	Publications that describe usage of data.
Address	Address line for the location
Algorithm Citation	Information identifying the algorithm and version or date.

Recommendations

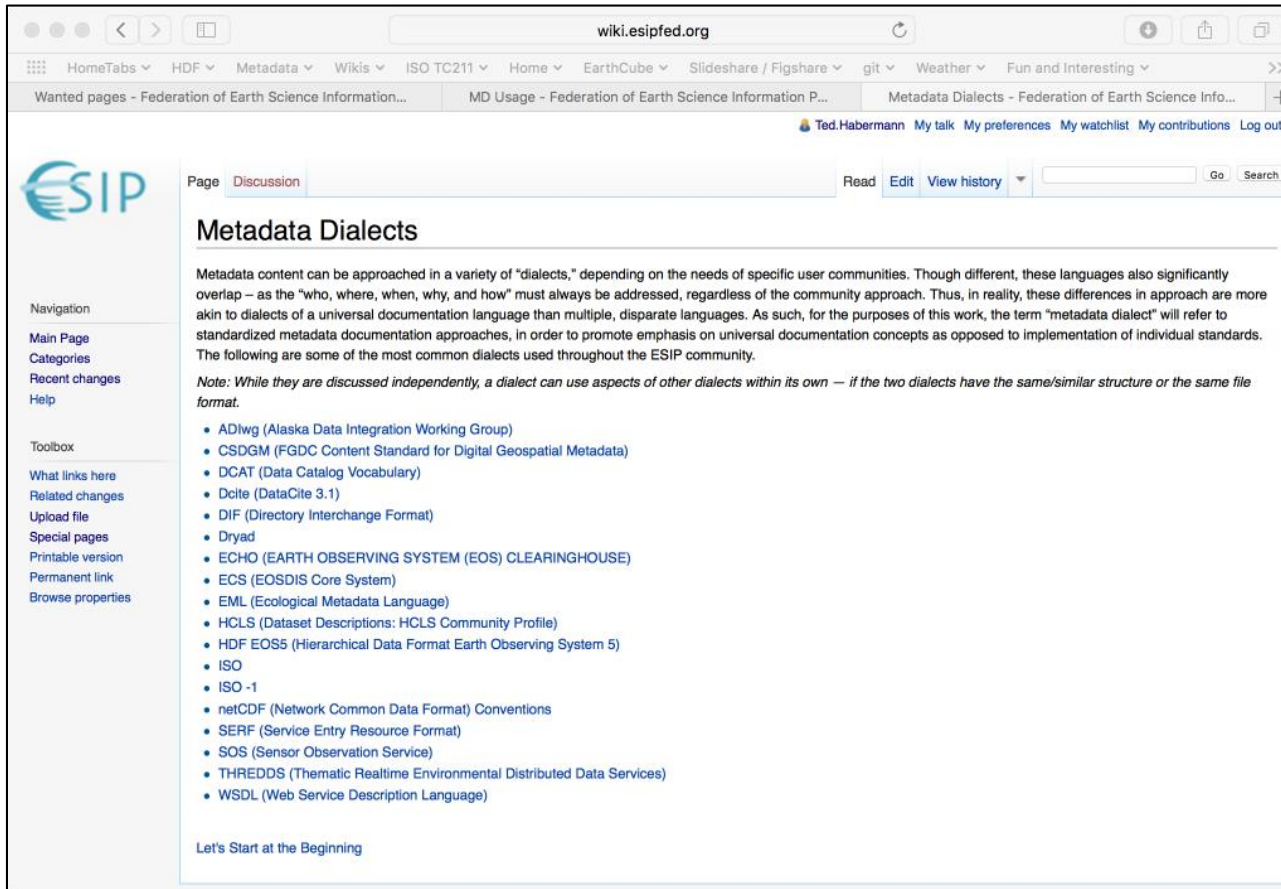


The screenshot shows a web browser window with the URL wiki.esipfed.org. The page is titled "Documentation Recommendations" and is part of the ESIP (Earth Science Information Partnership) wiki. The left sidebar contains navigation links such as "Main Page", "Categories", "Recent changes", and "Help". The main content area includes a "Discussion" tab, a "Read Edit View history" menu, and a search bar. The page text explains the purpose of documentation recommendations, which are designed to facilitate discoverability, accessibility, usability, understandability, and interoperability of data across disciplines. It mentions that recommendations are subdivided into four categories: Discovery, Accessibility/Usability, Understanding, and Data Discovery. A "Contents" section lists the following items:

- 1 Discovery
- 2 Data Accessibility/Usability
- 3 Data Understanding
- 4 Documentation Recommendation Comparison Tool

The "Discovery" section is currently selected, and its content is displayed below. It defines discoverability as the ability of information to be found and emphasizes the importance of metadata in making data discoverable. The sub-section aims to depict discoverability documentation needs and concepts and map to them in the different dialects — thereby increasing compatibility and by default, discoverability. The sub-section includes links to "Data Discovery (ACDD)", "Data Discovery (CSW)", and "Data Discovery (DataCite)".

Dialects



The screenshot shows a web browser window displaying the 'Metadata Dialects' page on the wiki.esipfed.org website. The browser's address bar shows 'wiki.esipfed.org'. The page has a navigation bar at the top with various menu items like 'HomeTabs', 'HDF', 'Metadata', 'Wikis', 'ISO TC211', 'Home', 'EarthCube', 'Slideshare / Figshare', 'git', 'Weather', and 'Fun and Interesting'. Below the navigation bar, there's a user profile for 'Ted.Habermann' with links to 'My talk', 'My preferences', 'My watchlist', 'My contributions', and 'Log out'. The main content area is titled 'Metadata Dialects' and includes a paragraph explaining that metadata content can be approached in a variety of 'dialects' depending on the needs of specific user communities. It also includes a note about discussing dialects independently and a list of common dialects used throughout the ESIP community. The list includes ADIwg, CSDGM, DCAT, Dcite, DIF, Dryad, ECHO, ECS, EML, HCLS, HDF EOS5, ISO, ISO -1, netCDF, SERF, SOS, THREDDS, and WSDL. The page also features a sidebar with navigation links and a toolbox.

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Metadata Dialects

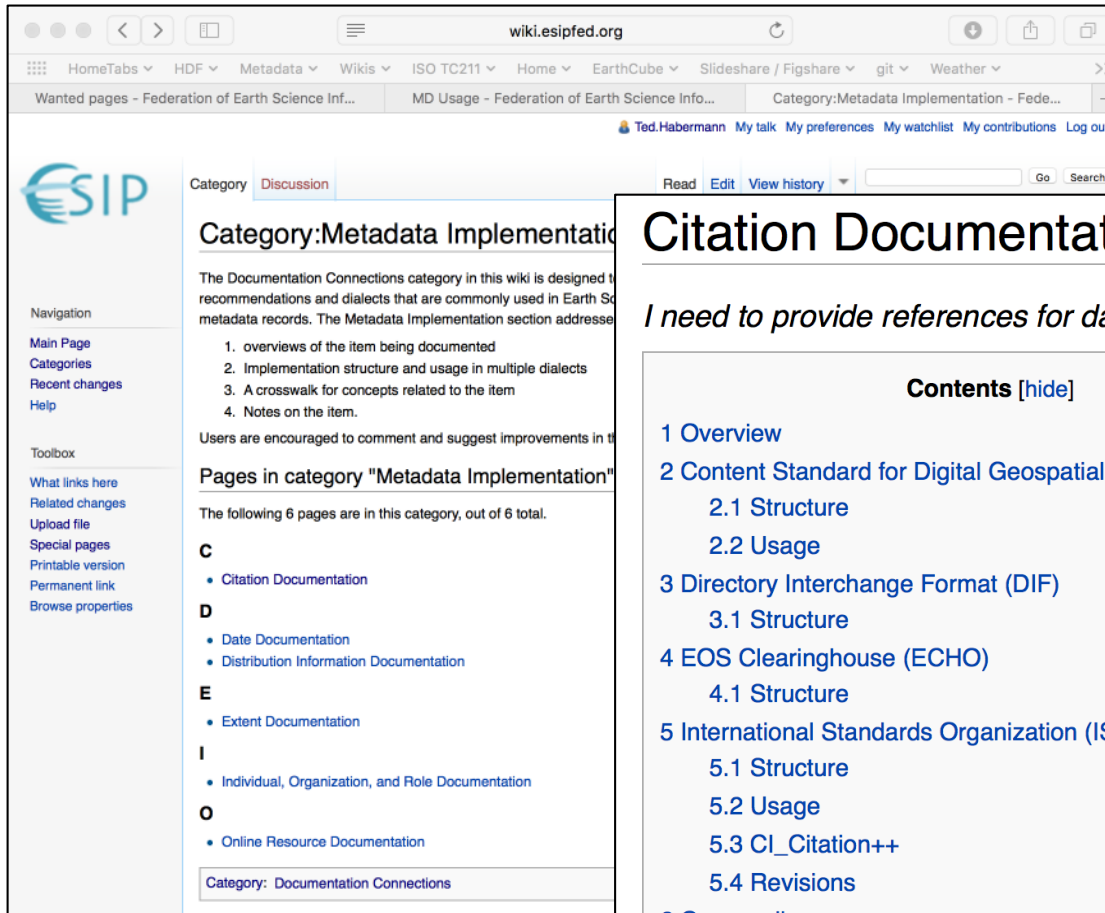
Metadata content can be approached in a variety of "dialects," depending on the needs of specific user communities. Though different, these languages also significantly overlap – as the "who, where, when, why, and how" must always be addressed, regardless of the community approach. Thus, in reality, these differences in approach are more akin to dialects of a universal documentation language than multiple, disparate languages. As such, for the purposes of this work, the term "metadata dialect" will refer to standardized metadata documentation approaches, in order to promote emphasis on universal documentation concepts as opposed to implementation of individual standards. The following are some of the most common dialects used throughout the ESIP community.

Note: While they are discussed independently, a dialect can use aspects of other dialects within its own — if the two dialects have the same/similar structure or the same file format.

- ADIwg (Alaska Data Integration Working Group)
- CSDGM (FGDC Content Standard for Digital Geospatial Metadata)
- DCAT (Data Catalog Vocabulary)
- Dcite (DataCite 3.1)
- DIF (Directory Interchange Format)
- Dryad
- ECHO (EARTH OBSERVING SYSTEM (EOS) CLEARINGHOUSE)
- ECS (EOSDIS Core System)
- EML (Ecological Metadata Language)
- HCLS (Dataset Descriptions: HCLS Community Profile)
- HDF EOS5 (Hierarchical Data Format Earth Observing System 5)
- ISO
- ISO -1
- netCDF (Network Common Data Format) Conventions
- SERF (Service Entry Resource Format)
- SOS (Sensor Observation Service)
- THREDDS (Thematic Realtime Environmental Distributed Data Services)
- WSDL (Web Service Description Language)

[Let's Start at the Beginning](#)

Guidance Pages



Category: [Discussion](#)

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Category:Metadata Implementation

The Documentation Connections category in this wiki is designed to provide recommendations and dialects that are commonly used in Earth Science metadata records. The Metadata Implementation section addresses:

1. overviews of the item being documented
2. Implementation structure and usage in multiple dialects
3. A crosswalk for concepts related to the item
4. Notes on the item.

Users are encouraged to comment and suggest improvements in the discussion page.

Pages in category "Metadata Implementation"

The following 6 pages are in this category, out of 6 total.

C

- [Citation Documentation](#)

D

- [Date Documentation](#)
- [Distribution Information Documentation](#)

E

- [Extent Documentation](#)

I

- [Individual, Organization, and Role Documentation](#)

O

- [Online Resource Documentation](#)

Category: [Documentation Connections](#)

Citation Documentation

I need to provide references for datasets and associated resources.

Contents [\[hide\]](#)

- [1 Overview](#)
- [2 Content Standard for Digital Geospatial Metadata \(CSDGM\)](#)
 - [2.1 Structure](#)
 - [2.2 Usage](#)
- [3 Directory Interchange Format \(DIF\)](#)
 - [3.1 Structure](#)
- [4 EOS Clearinghouse \(ECHO\)](#)
 - [4.1 Structure](#)
- [5 International Standards Organization \(ISO\)](#)
 - [5.1 Structure](#)
 - [5.2 Usage](#)
 - [5.3 CI_Citation++](#)
 - [5.4 Revisions](#)
- [6 Crosswalks](#)
- [7 Notes](#)
 - [7.1 CodeLists as Types](#)

ISO Metadata Explorer

The image displays two screenshots of the ISO Metadata Explorer website, which is hosted on wiki.esipfed.org.

Left Screenshot: MI Metadata

The page title is "MI Metadata". It describes a "Comprehensive explorer of ISO 19115 and 19115-2 metadata standards to more information and examples."

Elements

		Definition and Recommended Practice
1	metadataIdentifier	0..1 Code that uniquely identifies this metadata record. Recommended Practice is to use a universal (UUID), to distinguish it from other metadata files - for example C005000 two general approaches to ensuring these identifiers: 1. use a universal (UUID), to distinguish it from other metadata files - for example C005000
2	defaultLocale	0..* Default language and characterSet metadata. Locale is mandatory when language is used in free text descriptions
3	parentMetadata	0..1 Document a higher level metadata Provide full citation to parent.
4	metadataScope	0..* Scope of resource to which the metadata applies. Now includes an MD_ScopeCode hierarchy level. Repeat if more than one applicable to this metadata description
5	contact	1..* Individual and/or organization responsible for metadata creation and maintenance roleCode="pointOfContact". Provide such address, phone and email.
	dateStamp (choose one)	 Date of last metadata update. High revisiting the metadata content and

Right Screenshot: CI Responsibility

The page title is "CI Responsibility". It describes "Information about the spatial and temporal coverage of the responsibility."

Elements

		Definition and Recommended Practice
1	role	1 Function performed by the responsible party. See list of definitions for best practices.
2	extent	0..* Information about the spatial and temporal coverage of the responsibility. This is used when different people or organizations are responsible for different spatial or temporal sections of the resource, e.g. if the responsibility changes over time.
3	party	1..* Information the person or organization that serves this responsibility.

Legend

- yellow: mandatory
- green: conditional
- blue: optional

ISO Legend

Possible Parent Elements

- ISO People

Please contribute!

Category: ISO Explorer

http://wiki.esipfed.org/index.php/MI_Metadata

http://wiki.esipfed.org/index.php/CI_Responsibility

ISO Metadata Explorer

The screenshot shows the ISO Metadata Explorer web application. The browser address bar displays `wiki.esipfed.org`. The top navigation bar includes links for HomeTabs, HDF, Metadata, Wikis, ISO TC211, Home, EarthCube, Slideshow / Figshare, git, Weather, Fun and Interesting, Tracking, WSSSPE, XSL, and JSONLint. Below this, a secondary navigation bar shows links for Wanted pages, Federation of Earth Science Inform..., MD Usage - Federation of Earth Science Informa..., MD Usage - Federation of Earth Science Informa..., and Category:ISO Explorer - Federation of Earth Scie....

The main content area is titled "Category:ISO Explorer" and includes a search bar with "Go" and "Search" buttons. The left sidebar contains a navigation menu with links for Main Page, Categories, Recent changes, Help, and a Toolbox with links for What links here, Related changes, Upload file, Special pages, Printable version, Permanent link, and Browse properties.

The main content area lists pages in the category "ISO Explorer", showing 158 total pages. The list is organized into three columns:

- A**
 - [AName](#)
 - [Angle](#)
- B**
 - [BaseUnit](#)
 - [Boolean](#)
- C**
 - [CharacterString](#)
 - [CI Address](#)
 - [CI Citation](#)
 - [CI Citation for MD DataIdentification](#)
 - [CI Contact](#)
 - [CI Date](#)
 - [CI OnlineResource](#)
 - [CI Party](#)
 - [CI Responsibility](#)
 - [CI ResponsibleParty](#)
- I cont.**
 - [ISO FAQ](#)
 - [ISO Topic Categories](#)
 - [Template:ISOOrderingFooter](#)
- L**
 - [LE Algorithm](#)
 - [LE NominalResolution](#)
 - [LE Processing](#)
 - [LE ProcessStep](#)
 - [LE ProcessStepReport](#)
 - [LE Source](#)
 - [Length](#)
 - [LI Lineage](#)
 - [LI ProcessStep](#)
 - [LI Source](#)
 - [LineString](#)
 - [LocalName](#)
- M cont.**
 - [MemberName](#)
 - [MI AcquisitionInformation](#)
 - [MI Band](#)
 - [MI CoverageDescription](#)
 - [MI Event](#)
 - [MI GCP](#)
 - [MI GCPCollection](#)
 - [MI Georectified](#)
 - [MI Georeferenceable](#)
 - [MI ImageDescription](#)
 - [MI Instrument](#)
 - [MI Metadata](#)
 - [MI Objective](#)
 - [MI Operation](#)
 - [MI Plan](#)
 - [MI Platform](#)
 - [MI PlatformPass](#)

Acknowledgements



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Raytheon

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The HDF Group